



Additional chart coverage may be found in CATP2, Catalog of Nautical Charts.

## SECTOR 4 — CHART INFORMATION

# SECTOR 4

## JAWA—SOUTH COAST AND SELAT SUNDA

**Plan.**—This sector describes the S extremity of Sumatera, the Selat Sunda, and the W and S coasts of Jawa, as far E as **Tanjung Bantenan** (8°47'S., 114°32'E.).

The descriptive sequence is N and S from **Tanjung Serdang** (4°27'S., 105°54'E.) to **Cukuh Balimbing** (5°56'S., 104°33'E.), then to the E, describing the S coast of Jawa.

### General Remarks

**4.1 Winds—Weather.**—The flood current sets NE and the ebb current sets SW; both are weak. In the channel, the flood current sets NE and may attain 4.8 knots during W winds.

**Tides—Currents.**—Between Terumbu Kalihat (Stroom Rock) and Kepulauan Sumur, tidal current are very strong, with a maximum of 6 knots; eddies and rips occur.

Along the NW and S shores of Pulau Singiang, the combined SW setting tidal and nontidal current is strong; E of Pulau Sangiang, typical tidal currents occur.

Rips and whirlpools occur along the SW shore of Pulau Sangiang.

Rips occur at Terumbu Gosal (Winsor Rock).

Rips occur when tidal current speed exceeds 1 knot.

Between Pulau Merak and the coast of Java, the current speed does not exceed 2 knots.

Near Kepulauan Seribu, the E current is always stronger than the W current; the speed do not exceed 2 knots.

### Selat Sunda

**4.2 Selat Sunda** (Sunda Strait), between the W end of Jawa and the S coast of Sumatera, is the principal channel connecting the Java Sea and the Indian Ocean.

The NE entrance, between **Ujung Kanggalan** (Oedjoeng Kanggalan) (5°48'S., 105°48'E.) and Tanjung Pujut, the NW extremity of Jawa, is nearly 15.5 miles wide.

The SW entrance, between **Cukuh Balimbing** (5°56'S., 104°33'E.) and **Pulau Panaitan** (6°35'S., 105°13'E.), N of the W end of Jawa, is about 52 miles wide. The charted features, at the entrance of the strait, are radar identifiable at a distance of 35 miles. Vessels over 100,000 dwt do not use Selat Sunda.

The S coast of Sumatera, which forms the N side of Selat Sunda, slopes gently down to the sea. It is densely wooded and has several high peaks inland. Several extensive indentations complete the S coast of Sumatera.

The W coast of Jawa is not high, with a low coast over a large portion of its length; it is also densely wooded.

**Christmas Island** (10°28'S., 105°37'E.) lies approximately 250 miles SSE of the SW entrance to Selat Sunda.

**Winds—Weather.**—The Southeast Monsoon prevails from April to September, but does not attain any great degree of constancy until August. It is particularly unsteady in the daytime and variable winds are common. In August and September, the monsoon blows strong and steady from SE and

SSE, particularly off the Jawa coast at night when the land breeze reinforces the monsoon.

The Northwest Monsoon arrives at the end of November. This results in WSW winds in December, W winds in January, and WNW winds in February.

Clouded skies and SW squalls are frequent, the later occurring during the Northwest Monsoon and accompanied by thunder. The rainfall corresponds with the monsoons, the Northwest Monsoon months being the rainier. December and January have the greatest rainfall, with September the least.

The state of the sea is generally rough. Heavy swells are not uncommon, particularly during the stronger period of the Northwest Monsoon, when the current is running counter to the prevailing wind. As a rule, the sea is calmest in March, July, and November.

**Tides—Currents.**—During the Northwest Monsoon, current direction varies through Selat Sunda. From April to September, the currents are SW to S at a rate of about 0.75 knots. From October to March, the currents are NE to N at the same rate. When the winds are from the NW through N to NNE, the current sets S to SW at up to 1.3 knots.

The tidal currents in Selat Sunda, when combined with the currents described above, are strong and mainly diurnal. Where the strait broadens out, they decrease in rate rapidly and in the **Great Channel** (6°23'S., 105°18'E.), are hardly appreciable.

When the flow is strong to the SW, sharply defined tide rips are often met in the N entrance to the strait. With such a flow the rates are strong along the NW and S sides of **Pulau Sangian** (5°58'S., 105°51'E.), causing heavy tide-rips and a whirlpool in the bay on the SW side of the island. In the open Java Sea near the Kepulauan Seribu island group, there is little horizontal movement of the water except the monsoon current which never exceeds 2 knots. The E current is always stronger than the W current among the Kepulauan Seribu.

The monsoon currents begin earlier here, and attain their greatest strength a month earlier than in adjacent waters. The W current predominates as early as March; it is strongest in April and May. The E current becomes evident in November and is strongest in December; its rate is double that of the W current in April and May.

**Directions.**—The main channel through the NE approach to the strait has been placed within a Restricted Area best seen on the chart. This area contains many exploratory and producing oilfields, which may or may not be marked or charted.

Vessels entering the Restricted Area may be challenged by Indonesian air and sea patrols.

A vessel approaching the strait from the N should proceed to the S end of the swept channel in Selat Baur, and follow a track defined by the following points:

- 5°16'S, 106°47'E (4 miles SE of Beting Raja).
- 5°42'S, 106°41'E (13.5 miles SE of Pulau Payung).
- 5°50'S, 106°34'E (1.5 miles SE of Pulau Payung).
- 5°50'S, 106°17'E (1.5 miles S of Pulau Tunda).
- 5°50'S, 106°02'E (3 miles N of Tanjung Pujut).

- f. 6°02'S, 105°51'E (3 miles NW of Tanjung Cikoneg).
- g. From point f, proceed in a SW direction through Selat Sunda.

Vessels approaching the strait from S should follow the directions in a reverse order. Keep a lookout for traffic bound to and from Jakarta, especially in the Outer Channel. The least depth shown on the track is reported to be 19.8m.

**Caution.**—The area between the S coast of Sumatera and the extensive island group **Kepulauan Seribu** (5°29'S., 106°31'E.), which fronts the approach to Selat Sunda from the NE, contains a number of islands, reefs, rocks, and drying banks that must be considered when approaching Selat Sunda.

A dangerous area due to mines, having a 3 mile radius, lies centered 3 miles SW of **Kepulauan Segama** (Gebroeders) (5°10'S., 106°06'E.), in 5°12'S, 106°04'E.

Because of volcanic eruptions, the area between **Pulau Rakata** (Pulau Khakatau) (6°09'S., 105°26'E.) and **Pulau Sebesi** (5°58'S., 105°29'E.), should be considered unsafe; only routes that will clear this area should be taken. The sea bottom in the vicinity of the islands is subject to change. See the remarks on volcanic activity.

Submarine gas and oil pipelines connect between various platforms within a number of oil fields, and between the existing oil fields in the N approaches to Selat Sunda.

Vessels that are going to anchor in the area, run the risk of prosecution for any damage which may be caused from anchorage.

Mariners are warned that ferries cross Selat Sunda between Bakauhuni (5°52'S., 105°45'E.) and ports on the N coast of Jawa.

## Tanjung Serdang to Tanjung Tua

**4.3** The coast trends S from **Tanjung Serdang** (4°27'S., 105°54'E.) to **Tanjung Tua** (5°55'S., 105°43'E.) and except for a few hills in the S part, is low, flat, and swampy. Off-lying islands in the S part of the coast constitute a possible danger for vessels in the area.

A bank of drying soft mud, 0.5 mile wide in places, extends nearly the entire length of this coast, except off the outlets of several rivers and at other places marked by sandy beaches.

Outside this bank, the depths increase gradually seaward and good anchorage can be taken almost everywhere. The bottom is clay with a layer of mud.

**Tanjung Serdang** (4°27'S., 105°54'E.), the northernmost point of this sector, has a mudbank, which is reported to dry. It stretches 3 miles NNW and extends about 1 mile from the coast.

From Tanjung Serdang to Tanjung Bungin, about 6 miles S, the coast is marked by trees considerably higher than those to the N or S.

**Tanjung Kenam** (4°40'S., 105°55'E.), 12.5 miles S of Tanjung Serdang, has depths of less than 7.3m, sand and mud, as far as 13 miles offshore. Anchorage can be taken by vessels with local knowledge off the outlet of the **Wai Seputih** (4°41'S., 105°53'E.).

The recommended position is with Tanjung Keman bearing 331° and the river mouth bearing 304°, in a depth of 6m, soft mud, distance 4 miles. A bar across the outlet restricts entrance to all but small craft.

The coast between Tanjung Kenam and **Tanjung Pulausekopong** (4°56'S., 105°54'E.) is about 16 miles long and marshy. **Clifton Bank** (4°56'S., 106°04'E.), a patch of hard sand with a least depth of 5m, lies nearly 9 miles E of Tanjung Pulausekopong. A buoy is moored off the E side of Clifton Bank. This buoy has been reported missing.

The coast between Tanjung Pulausekopong and **Tanjung Penet** (5°15'S., 105°52'E.), a distance of about 20 miles, is flat, thickly wooded, and has no distinguishing features.

Tanjung Penet is a rounded point which cannot be identified except when close to the coast. A reef, with a depth less than 1.8m, lies approximately 4 miles S of Tanjung Penet.

**Gosong Syahbandar** (Sjahbandar Bank) (5°05'S., 106°00'E.) consists of a number of sandy ridges lying within 8 miles of the coast, about midway between Tanjung Pulausekopong and Tanjung Penet. All lie within the 10m line.

The coast between Tanjung Penet and **Tanjung Sekampung** (5°35'S., 105°49'E.), 20 miles S, is thickly wooded with high trees, sometimes visible from 14 miles. Tanjung Sekampung is difficult to distinguish from other positions, except those close inshore S of it. Muara Sekampung, one of the largest rivers in this district, flows into the sea on the N side of the point. The least depth that can pass over a bar across the outlet is 0.6m. Inside the bar, the depths increase rapidly to 7m and 9m. Surf usually marks the bar during the Southeast Monsoon.

Anchorage can be taken by vessels with local knowledge off the outlet of the river. In this position the outlet bears 247°, distance 2 miles, and a conspicuous tree of **Pulau Mundu** (Moendoe) (5°41'S., 105°50'E.) bears 188°. The depth is reported to be about 16m, mud. The rate of the tidal current at this anchorage is from about 1.5 to 2 knots.

**4.4 Pulau Mundu** (5°41'S., 105°50'E.), 6 miles S of Tanjung Sekampung, is a coral island, covered with coconut trees and fringed by a reef, with some above-water rocks. The island is marked by a light.

**Kepulauan Seram** (5°45'S., 105°48'E.) are three islets lying near the coast, 3.75 miles SSW of Pulau Mundu.

Pulau Seram, the N and largest islet, is covered with coconut trees.

The E side is a swamp, with a few bare tree trunks. A coral patch, with a depth of about 10m, lies 1 mile E of this islet. Pulau Seram is the only islet that can be seen from any distance. All these islets lie within the 5m line.

Small craft, with local knowledge, can find shelter between the islets and the coast, in depths of 1 or 2m, sand and mud.

**Ujung Kanggalan** (Oedjoeng Kanggalan) (5°48'S., 105°48'E.) is a low point, 3 miles S of Pulau Seram. The intervening coast is low and weeded. From abreast this point, the mountain **Gunung Rajabasa** (Radjabasa) (5°47'S., 105°38'E.) is prominent.

**Pulau Kupiah** (5°47'S., 105°48'E.), high and covered with vegetation, is located 0.5 mile N of Ujung Kanggalan and 0.5 mile offshore.

**Ujung Curam** (Tanjung Sumur Batu) (5°50'S., 105°47'E.), 3 miles SW of Ujung Kanggalan, is a prominent point formed by a spur running E from the saddle-shaped hill, **Gunung Panjang** (Pantjong) (5°50'S., 105°46'E.), which is 222m high. From NE, a separate summit appears just within the point and is visible 2 miles E of Pulau Mundu, an island 1.5 miles

offshore and 10 miles NNE of Ujung Curam (Tanjung Sumur Batu).

In addition to Gunung Panjang (Pantjong), the following hills are noticeable: Sepan, a conical hill, 207m high, 0.5 mile W of Gunung Panjang; and Chikur, 250m high with a round grass covered summit, 2 miles WSW of Gunung Panjang.

Pulau-Pulau (Kepulauan) Sumur is a group of four islands and a number of islets lying within 2.5 miles of the Sumatera coast between Ujung Curam (Tanjung Sumur Batu) and **Tanjung Tua** (5°55'S., 105°43'E.), about 5.75 miles SSW.

Most of the islands are high and densely wooded. The depths between the islands and reefs are variable; the bottom is rocky and covered with sand.

**Tides—Currents.**—During the Northwest Monsoon, the NE current may attain a rate of 4.75 knots between the islands. It is advisable to give the islands a berth of 1.5 miles.

**Pulau Kandangbalak** (5°53'S., 105°46'E.), the SW island, has two separate hills, the SW being higher; elsewhere the island is flat.

**Pulau Panjurit** (5°53'S., 105°47'E.), 0.75 mile ESE of the N end of Pulau Kandangbalak, has a ridge of hills 90m high along its S side. A light is shown from the NE point of the island; a racon is situated at the light.

**Pulau Rimaubalak** (5°52'S., 105°47'E.), the largest and highest of Kepulauan Sumur, lies 1 mile NNE of Pulau Kandangbalak. It has three summits, the SW having an elevation of 211m is very noticeable.

**Tanjung Tua** (5°55'S., 105°43'E.) is located about 2 miles WSW of the S extremity of Pulau Kandangbalak. It is a high, rocky, and wooded point, joined to higher land behind, by a low bare ridge. Close off the point are depths of 73m.

A light is shown on Tanjung Tua from a white metal framework tower, 15m high.

**Caution.**—It is not advisable to proceed through the channel between Kepulauan Sumur and the coast of Sumatera. Tidal currents of up to 3 knots cause strong eddies off the reefs.

## Islands and Dangers in the North Approach to Selat Sunda

**4.5** The main group of the Kepulauan Seribu islands extend in a N and S direction between the meridians of 106°30'E and 106°37'E. Vessels should not pass among them.

NW of the main group, near the usual route taken by vessels toward Selat Sunda from the N, is a smaller group consisting of four islands and a number of reefs. This smaller group is separated from the main group by a channel with depths of 21.9 to 27.4m.

The usual route taken by vessels bound for Selat Sunda from the N, lies between **Gosong Serdang** (Brouwers Reefs) (Brouwer Banken) (5°05'S., 106°16'E.) and **Pulau Jagautara** (Jaga Utara) (5°12'S., 106°28'E.).

Pulau Jagautara (Jaga Utara) (Pulau Tuguan) lies about 36 miles off the coast of Sumatera, and about 50 miles N of the N coast of Jawa. It is entirely covered with brushwood and high trees, and can be seen at distances up to 14 miles. The island is surrounded by a reef which partly dries. A light is shown from the island. Pulau Jagautara is reported to give a good radar return up to 20 miles.

A Restricted Area is situated E of Pulau Jagautara. The N extremity of an oilfield lies 28 miles NW of Pulau Jagautara.

Numerous dangerous wrecks and obstructions are charted up to 20 miles N to NE of Pulau Jagautara.

**Gosong Serdang** (Brouwers Reefs) (Brouwer Banken), lying 13 miles NW of Pulau Jagautara and marked by a light, are two coral patches, 0.2 mile apart in a N and S direction. At high water, only a few rocks are visible and there is a small patch of coral sand on the N patch. They are visible from a distance of 2 miles.

A dangerous wreck lies about 19 miles NNE of Brouwers Reef.

**4.6 Kepulauan Segama** (Gebroeders) (Pulau Segamat) (5°10'S., 106°06'E.), two reef-fringed islets, lie about 15 miles off the coast of Sumatera, and about 21 miles W of Pulau Jagautara (Jaga Utara). The islets are small and covered densely with high trees.

A coral reef, which dries, fringes the islets. A coral patch, with a depth of 0.6m, lies 0.3 mile S of the S islet. In the Northwest Monsoon, Kepulauan Segama can be seen from a distance of 20 miles. In the Southeast Monsoon, they are not visible until much closer.

Two wrecks, one with masts showing lie, respectively, 3.5 miles NW and 3.75 miles NNW of the N extremity of Kepulauan Segama.

**Karang Basa** (Lynn Reef) (Lynn Bank) (5°12'S., 106°12'E.), 6.3 miles ESE of Kepulauan Segama, is a coral reef with a least depth of 0.6m. The reef, barely marked with ripples and discoloration, can only be detected close in; it sometimes breaks with a heavy E swell.

A depth of 12.8m was reported about 5.5 miles E of Karang Basa.

**Swallow Bank** (5°18'S., 106°04'E.), with a depth of 7.9m and steep-to, is a coral patch lying 13 miles E of **Tanjung Penet** (5°15'S., 105°52'E.).

**Batu Karang Pematán** (5°24'S., 106°16'E.), a dangerous coral patch, lies in the fairway in a position about 16.5 miles SW of Pulau Jagautara. The least depth is 3.7m. Only under favorable conditions is there discoloration in the immediate vicinity, and occasionally there are tide-rips. Obstructions exist 6.5 miles and 7.5 miles WNW of Batu Karang Pematán.

A National Park is established among **Pulau-pulau Seribu** (5°30'S., 106°30'E.).

Oil fields in the N approaches to Selat Sunda are numerous. Each contains production platforms, pipelines, and mooring buoys. Most platforms and structures are lit. Mariners should navigate with caution in these areas, as some structures are unlit, unmarked, or uncharted; submerged obstructions also exist.

**4.7 Cinta Oil Terminal** (5°30'S., 106°14'E.) ([World Port Index No. 50350](#)) consists of numerous oil production platforms, pipelines, and mooring buoys. The area extends NNE and S of Batu Karang Pematán. Pipelines are laid from various production platforms to a central gathering platform situated 3 miles SSW of Batu Karang Pematán.

Off-lying platforms are situated 17 miles NNE, 9 miles NE, 5 miles SE, and 9.5 miles SW of the central gathering platform; they are connected to it by pipeline.

The oil platforms in the area are well lighted at night. The SBMs are designed to handle vessels in the 55,000 dwt class.

There is a radio station at the terminal. Initial ETA should be sent not less than 72 hours prior to arrival. Further ETA information should be sent 48 hours, 24 hours, 12 hours, and 4 hours if change of original ETA varies more than 1 hour.

When the vessel is 4 hours from the terminal, communications on VHF channel 16 should be established.

There are four lighted SBMs, in depths of about 21m.

No. 1 Storage SBM is situated in position 5°25'40"S, 106°14'42"E. The storage barge *Cinta Natomas*, 143,000 dwt and 183m in length, is permanently moored to it, and contains the Terminal Administrative Offices.

No. 2 Storage SBM is moored in position 5°26'23"S, 106°13'45"E, 1.5 miles NW of the central platform.

No. 1 Export SBM in position 5°25'25"S, 106°14'09"E. Tankers load to a displacement between 20,000 and 175,000 dwt, with a length between 160m and 325m.

No. 2 Export SBM is moored 1 mile SW of No. 2 Storage SBM.

**Pilotage.**—Pilotage is compulsory within the terminal limits. The Mooring Master boards vessels in the anchorage area, and will advise on all operational matters within the terminal area. Weather permitting, the terminal operates 24 hours a day. Vessels can berth in daylight only, but can unberth at any time.

**Regulations.**—Indonesian government regulations are strictly enforced. The Indonesian flag should be flown by day, throughout the vessel's stay at the terminal. Port facilities are not available, however, emergency medical services can be arranged.

**Anchorage.**—Anchorage can be taken within a 1 mile radius of position 5°25'25"S, 106°11'09"E, in a depth of 36m.

**4.8** Karang Kabung (Hajiwal), with a depth of 2.4m, lies about 3 miles E of Terumbu Urai (Arminia). It is also not marked by discoloration.

**Kepulauan Dua** (Doea Eilanden) (Pulau Dua) (5°25'S., 106°28'E.), two islets, lie 12 miles E of Batu Karang Penatan. They are thickly wooded with high trees and separated by a clear, deep channel about 1 mile wide. Beronang, a patch with a depth of 2.4m, lies about 2.3 miles SW of the W Kepulauan Dua (Doea Eilanden). It is not marked at high water.

**Gosong Rangat** (5°28'S., 106°26'E.), an islet conspicuous by its high trees, lies about 1.75 miles S of Beronang. Karang Rangat, with a depth of 0.9m, lies about 1 mile SE of Gosong Rangat. It is marked by surf and discoloration, and breaks with any sea.

Two small, steep-to, stone banks midway between Kepulauan Dua and Gosong Rangat, with depths of 5.4 and 7.3m, respectively, are marked by ripples when a strong current is running. A dangerous rock was reported 1.75 miles ESE of the two small stone banks.

**Pulau Pebelokan** (West Eiland) (5°29'S., 106°24'E.), 3 miles WSW of Gosong Rangat, is a self-supporting offshore base. There are numerous buildings and installations on the island.

A wharf, with a large storage area on the S side of the island, can accommodate coasters up to a 6m draft and 36m in length. The islet is visible from distances up to 13 miles.

Coventry Reef, 1 mile SSW of Pulau Pabelokan, dries in patches at its N end. It is marked by discoloration and breaks with the least swell or sea.

**Pulau Jagung** (Djagoeng) (5°29'S., 106°31'E.), 5 miles E of Gosong Rangat, is thickly covered by high trees. It is the easternmost island of the Kepulauan Seribu island group covered by this sector.

## Tanjung Pontang to Tanjung Pujut

**4.9** This portion of the N coast of Jawa is generally low, marshy, and thickly wooded, except for the mountains S of **Tanjung Pujut** (5°52'S., 106°02'E.). Pinang, a hill, 259m high, 11.5 miles SSE of Tanjung Pujut, and the islands off **Teluk Banten** (5°58'S., 106°11'E.) are the few prominent landmarks along this stretch of coast.

**Tanjung Pontang** (5°56'S., 106°16'E.), about 7.5 miles S of Pulau Tunda, is a low, wooded point with high trees. It is the E entrance point of Teluk Banten. The E side of this point appears to be extending N.

**Caution.**—Nearly all the rivers flow into the sea with a considerable amount of debris, therefore, vessels should keep in depths over 11m when rounding these points.

Teluk Banten, entered between Tanjung Pontang and **Tanjung Kapo** (5°56'S., 106°07'E.), 8.75 miles W, is of no importance for general shipping. The hilly land on the W side of the bay terminates in Gunung Santri, a prominent hill, 95m high, with an isolated tree on its summit, 3 miles SSW of Tanjung Kapo.

Tanjung Kapo is high and prominent; the remaining shores of the bay are low, marshy, and fringed by a wide shallow mudbank. Several islands lie in Teluk Banten, the largest being **Pulau Pinjang** (5°56'S., 106°09'E.). The roadstead off the river at the head of the bay is only suitable for small craft, due to continuous shoaling.

**4.10** **Guna Nusa** (5°56'S., 106°06'E.) is close NW of Tanjung Kapo. There is an offshore fabrication yard with a wharf, 60m long, parallel to the coast. Tugs and barges with a draft up to 4.8m can berth alongside. Anchorage for small vessels, in depths of 12.8m, lies off the coast between Pulau-pulau Kali.

**Directions.**—No attempt should be made to berth alongside the wharf at night, since there are numerous fish traps off the mainland and Panjung coasts.

By day, a vessel should steer S from the anchorage, keeping close to the fish traps off the coast of Panjang, and turn gradually to bring Tanjung Kapo ahead. On this heading, when 0.25 mile off the point, steer NW to close the wharf, but keeping clear of the a small black buoy that marks a sunken reef lying between 0.2 and 0.3 mile off the wharf.

From Tanjung Kapo, the coast trends about 4 miles NW to **Tanjung Piatu** (5°53'S., 106°04'E.), a low point with a few trees. Two low, wooded islands, about 0.2 mile offshore, lie about 1.5 miles SE of Tanjung Piatu.

Merak Oil Terminal, situated at Tanjung Piatu, consists of a dolphin berth connected to the shore by a narrow bridge. The largest vessel to berth was 32,000 tons.

Anchorage, in depths of 30 to 40m, lies 1 mile N to NE of the terminal.

Berthing and unberthing is conducted at slack water due to strong tidal currents. Mooring boats are available.

An obstruction, with a depth of 14.9m, lies 3.5 miles ENE of Tanjung Piatu.

**Tanjung Pujut** (5°52'S., 106°02'E.), the NW extremity of Jawa, is located about 2 miles W of Tanjung Piatu. It is a narrow tongue of land, 13m high.

Gunung Gede, 594m high, is a flat-topped summit, 3.3 miles SSE of Tanjung Pujut. Gunung Batur, 553m high, is nearly 2.5 miles WSW of Gunung Gede. **Gunung Pinang** (6°04'S., 106°06'E.), a hill 259m, 11.5 miles SSE of Tanjung Pujut, is also a prominent landmark on this stretch of coast.

## South Side of Selat Sunda

**4.11** The coast between Tanjung Pujut and Tanjungsekong, located on Tanjung Sekong, is high and broken by steep points. Gosong Jawa (Java Rif), a small coral patch with a depth of 8.8m, lies about 0.6 mile offshore, W of Tanjung Sekong. Ripples appear when the current is running at a rate of 1 to 2 knots; at times it is marked by discoloration.

**Tanjungsekong Merak Petroleum Base** (5°55'S., 106°00'E.) ([World Port Index No. 50935](#)), situated on Tanjungsekong, is a new terminal, fabricating equipment for offshore oil installations.

Vessels up to 91.4m long and 2,000 dwt, with a draft of 4.5m, can berth alongside. The jetties have a depth of 5.5m alongside.

Pilotage is not available.

Anchorage off the jetty, sheltered from NE to SSW, but otherwise exposed, can be obtained 0.4 mile NW of the jetty, in a depth of 36m, with good holding ground. Tidal currents in the anchorage run NE and SW up to 2 knots.

**Pelabuhan Merak** (Merak Besar) (5°56'S., 105°59'E.), a wooded island, 66m high, a little less than 1.3 miles SSW of Tanjung Sekong, is fringed by a narrow coral reef which is steep-to on its NW side.

**Pebuhan Merak Kecil** (5°56'S., 106°00'E.), 0.45 mile SE of Pebuhan Merak and 0.15 mile offshore, is a low islet.

**4.12 Tarembu** (5°56.2'S., 105°59.5'E.), a rock with a depth of 1.1m, lies in the middle of the W side of the extensive reef, with depths of less than 10m, lying between Pebuhan Merak and Pebuhan Merak-Kecil. A 4.9m patch lies on this reef, 0.1 mile NNE of Tarembu. A shoal, with a depth of 5.5m, sand and stones, lies close NE of Tarembu.

A dangerous wreck lies 0.15 mile NE of Tarembu.

Vessels may enter the roadstead from S passing W of Merak Kecil and then either side of Tarembu; the E channel has a depth of 10.6m while the W channel has a depth of 10.8m.

The E channel is marked by lighted buoys and a beacon; these buoys are reported unreliable.

The W channel is marked by a lighted beacon. The current in the strait is usually S, at a maximum rate of 2 knots

The entrance to the roadstead, N of Pebuhan Merak, is narrowed by a bank which extends 137m from that island, and there is a 7.9m patch mid-channel.

The roadstead, in addition to offering shelter because of Pebuhan Merak and the breakwater-like reefs adjacent to Tarembu, affords the only sheltered anchorage on the W coast of Jawa. It is comparatively free of swells, and the maximum rate of tidal currents is about 2 knots.

**4.13 Merak** (Pulaumerak) (5°56'S., 106°00'E.) is a village on the shore of Jawa, E of Pebuhan Merak. There is a T-head pier, with a berthing length of 88m and a depth of 5.5m alongside. A concrete quay, 158m in length, SE of the pier, affords alongside berth to vessels with a draft of less than 1.8m. There is a coastal radio station situated at the village of Merak.

**Depths—Limitations.**—There are two small piers, 1.5 miles S of Pulaumerak, and two mooring buoys near it.

Vessels of 6,000 dwt, 90m in length and 7m draft, can berth to load liquefied chemicals from tanks near the piers.

Pilotage is reported not to be available and anchorage can be taken about 0.3 mile N of the piers, in a depth of about 12m.

**Caution.**—Brouwers Sand is a formation of hard sand extending about 3 miles in a SW direction, parallel to the coast from a position about 0.5 mile SW of the S extremity of Pebuhan Merak. The least depth over this shoal, 4.8m, is near the NE extremity.

**Pulau Ular** (6°00'S., 105°56'E.) is a steep-to rock, lying about 5.75 miles SW of the S extremity of Pebuhan Merak. A shoal patch of 10.1m, lies 0.75 mile NE of Pulau Ular. A light is shown from the island.

**4.14 Cigading** (6°01'S., 105°57'E.) ([World Port Index No. 50925](#)) is a port for the import of bulk iron ore, situated on the W coast of Jawa, 1.75 miles E of Pulau Ular.

**Depths—Limitations.**—A T-headed concrete jetty projects 300m from the shore, with the T-head orientated NE-SW. It is equipped with a conveyor for bulk handling of ore. The main berthing face is on seaward side of the T-head, 570m in length, with a depth alongside of 14m. On the inside of the NE end of the T-head, there is a berth with a length of 200m and a depth of 12m alongside. Three shore cranes are available. Vessels can use their own equipment for loading and unloading.

Vessels up to 90,000 dwt, with a maximum length of 160m and a maximum draft of 11.5m, can be accommodated.

A berth, 85m long, is situated on the SW side of the arm, which joins the SW end of the main wharf. A 250m extension of the berth, in a NE direction, was reported to be completed.

A tanker berth with depth of approximately 18m, for tankers up to 220m in length, lies offshore 1.75 miles NE of the jetty. A vessel is secured, using tugs, between four mooring buoys (bow NE) and pipelines are connected to the shore from its starboard side.

**Pilotage.**—Pilots are not available. Assistance in berthing may be requested from the harbor master at Pebuhan Merak, 5 miles NNE. Berthing is only possible by day but unberthing is by day or night. At the tanker berth, berthing and unberthing is arranged during daylight only. The ETA of a vessel, its draft, and any special requirements for discharging cargo should be communicated 48 hours in advance.

**Anchorage.**—Vessels waiting to berth should anchor about 0.75 mile off the port, in depths of 20m. The tidal current sets

NE to SW at rates between 3 to 4 knots, and a sufficient length of anchor chain should be used.

**Directions.**—The port should be approached in daylight only, from a position about 0.5 mile S of Pulau Ular.

**4.15 Tanjung Leneng** (6°01'S., 105°57'E.) is a point on the coast of Jawa, about 1.3 miles SE of Pulau Ular. Tanjung Leneng is rocky and has a narrow fringe of reef. The coast near Tanjung Leneng is hilly, unlike the level coast above and below it. A reef, with a depth of 4.6m, lies 0.2 mile N of Tanjung Leneng. This reef is not easily recognized.

**Anyer Terminal** (6°02'S., 105°56'E.), close SW of Tanjung Leneng, consists of a jetty extending 200m from the shore with two berths used for importing salt and ethylene.

**Winds—Weather.**—Both the berths are exposed to winds from SSW through W to NE, and even in calm weather, there is a continual swell from the NW. During most of the Northwest Monsoon period (November to March), the berths are unusable.

**Depths—Limitations.**—An L-shape jetty extends 200m from the shore. The jetty head runs SW, with its seaward face forming No.1 Berth, 1,300m long, with depths from 11 to 11.5m alongside. It can accommodate a vessel of 22,000 dwt. A 2m draft clearance should be allowed for the swell conditions. A conveyer belt extends along the length of No. 1 Berth.

No. 2 Berth is orientated 078° to 258° on the seaward side of the structure and is situated 90m, NE of No.1 Berth. No. 2 Berth is 25m long and accommodates vessels of 2,000 dwt.

Berthing dolphins stand on either end of the berths and between them, accessible by catwalks. Tidal currents attain rates up to 6 knots and run parallel along No. 1 Berth. Vessels normally dock in daylight hours, but they may undock anytime.

**Pilotage.**—Pilotage is compulsory. Pilots from Merak are available at 4 hours notice. Vessels should transmit their ETA 24 hours before arrival through Cigading or Jakarta radio. Pilots and port authority operate on VHF channel 12.

**Anchorage.**—Anchorage, with good holding ground, lies 0.5 to 1 mile off No. 1 Berth.

**Tanjung Cikoneng** (Tanjung Tjikoneng) (6°04'S., 105°53'E.), about 5 miles SW of Tanjung Leneng, is low and overgrown with brushwood. A light is shown on the point. A dangerous wreck was reported to lie 0.75 mile NW of Tanjung Cikoneng.

**Caution.**—An underwater volcano is reported to lie 5.3 miles WNW of Tanjung Cikoneng.

**4.16 Anyer-lor** (Anjer-lor) (6°03'S., 105°55'E.) ([World Port Index No. 50930](#)) is a village 2.5 miles NE of Tanjung Cikoneng, identifiable by a hill, 60m high, near the coast N of it. A prominent white chimney stands near the coast, NE of the hill.

Anchorage off Anyer-lor is not easily found, but it can be approached by bearing of the summit of **Pulau Sangian** (5°58'S., 105°51'E.), which is visible in the haziest weather during the Southeast Monsoon, and off the lighthouse on Tanjung Cikoneng (Tanjung Tjikoneng).

A good berth is 0.3 mile from the drying coastal reef, with the lighthouse on Tanjung Cikoneng bearing 230° and the summit of Pulau Sangian bearing 320°. Small vessels can anchor in a depth of 7 to 9m, in an inlet near Anyer-lor during the Southeast Monsoon.

The coast trends about 4.3 miles SSW from Tanjung Cikoneng to **Pasangteneng Road** (6°08'S., 105°52'E.), a cove-like roadstead off the entrance of a river.

Pasangteneng Road has sloping shores of sand, sheltered on the N side by a coral reef, where landing can be easily effected.

**Pasang Tenang** (Pasangtenang) (Catharina Rosten) (6°08'S., 105°51'E.), two above-water rocks, surrounded by a reef, lie in the entrance of Pasangteneng Road. They are visible from a distance of about 3 miles. Several reefs lie within 0.35 mile N and NE of them. A few miles E of Pasangteneng Road are a number of high peaks.

**Gunung Gede** (6°08'S., 105°56'E.), the highest and southernmost peak, is about 4.5 miles E of the roadstead, and attains a height of 744m.

The W coast of Jawa trends S, about 19 miles, from Tanjung Cikoneng to Labuhan. Labuhan is a settlement, situated near the mouth of a river, which flows out about 1.5 miles NNE of **Pulau Popole** (6°24'S., 105°49'E.).

Small craft can pass in and out of the river at high water; a blue flag is displayed if conditions are unfavorable.

A shoal, with a depth of 3m, lies 1 mile W of the mouth of the river. Karang Kebua, a drying reef marked by breakers, lies 1 mile N of this shoal.

Pulau Popole, a low, sandy islet covered with vegetation, lies 1.5 miles SSW of Labuhan, and is easily recognized. A drying rock lies 2.75 miles SSW of Pulau Popole, with a 0.9m patch 0.25 mile E of it. A shoal, with a depth of 1.5m, is located close SSW of the drying rock.

**Miskam** (Teluk Lada) (6°28'S., 105°44'E.) indents the W coast, between the shore abreast Pulau Popole and Tanjung Lesung (6°29'S., 105°39'E.), about 10 miles SW.

Good anchorage can be taken in Teluk Lada during the Southeast Monsoon.

Tanjung Lesung, marked by a light, is a wooded point with a sandy beach. The land in the immediate vicinity of the point is low and flat, and the point is low, except for a hillock, 14m high.

Between Tanjung Lesung and **Tanjung Camara** (Tanjung Tjamara) (6°36'S., 105°37'E.), about 8.3 miles SSW, the coast is rocky. Several hills are located close inland.

The coast trends SSW about 13 miles from Tanjung Lesung to **Tanjung Palagan** (6°40'S., 105°34'E.). This section is generally low and contains numerous coconut plantations and other cultivated lands.

**4.17 Taluk Paraja** (Salamadatang) (6°41'S., 105°28'E.) is entered between Tanjung Palagan and **Tanjung Alangalang** (6°39'S., 105°22'E.), 12 miles W.

The beach is separated from the S coast of Jawa by a low neck of land, 1 mile wide.

In the fairway entrance to the bay are depths of 42 to 46m, decreasing gradually to 14.6m E of **Pulau-pulau Handeuleum** (6°45'S., 105°26'E.), and to 4m near the land. In the Northwest Monsoon, the W and S shores of the bay, which are visited by

fishermen during the Southeast Monsoon, are unpopulated and marshy. The E shore consists largely of sandy beaches.

Teluk Slamadatang has not been completely surveyed.

Panter Reefs (Panter Riffen) lie in the middle of the entrance to Teluk Slamadatang, about 5.75 miles E of Tanjung Alangalang. They are usually marked by surf, with a least depth of 2.7m.

Anchorage, with good holding ground, may be taken in Teluk Slamadatang. Turbulent seas occur during the Southeast Monsoon and also during the Northwest Monsoon, when the wind is from the N.

Landing can be effected NW of Pulau Handeuleum and on several sandy beaches on the E shore of Teluk Slamadatang, during the Southeast Monsoon.

**4.18 Teluk Peucang** (Meeuwen Baai) (6°42'S., 105°18'E.) indents the NW side of the peninsula between Tanjung Senini, 3 miles WSW of Tanjung Alangalang, and **Tanjung Lajar** (Tanjung Lajar) (6°45'S., 105°13'E.), about 8.5 miles SW.

The shore of Teluk Peucang is low, densely wooded, and fringed by a narrow coral reef.

**Pulau Peucang** (Meeuwen Eil) (6°44'S., 105°16'E.), in the S part of the bay, has a prominent summit. It is densely wooded, and fringed by a coral reef, with three rocks lying off the islands steep NW point.

There is a narrow passage between Pulau Peucang and the mainland, but a reef lies in the N part. During a SW wind, hard squalls followed by sudden lulls are experienced in this channel. Small vessels, with local knowledge, can obtain good anchorage in this passage.

**Pulau Panaitan** (6°35'S., 105°13'E.), the largest island in Selat Sunda, lies about 7 miles NW of Tanjung Alangalang. It is hilly and densely wooded, except in its SW part. The coasts are reef-fringed. Gunung Raksa, the highest peak near the E coast, is 320m high and visible from all directions. The W end of Pulau Panaitan is low and hard to distinguish.

The SW shore of Pulau Panaitan ends in a fringing reef, which dries. As far as 1.5 miles offshore the depths are less than 18.3m. A group of surf-marked rocks extends as far as 1 mile S from **Tanjung Kanangjajar** (Karangburung) (6°41'S., 105°11'E.), the S extremity of the island.

The inner part of the extensive indentation in the SW shore of the island has convenient depths for anchoring, but it is entirely open to the heavy S swell.

The E side of the island, 1.5 miles S of Tanjung Parat, the N extremity of the island, affords good anchorage in a depth of 24m, with Gunung Parat bearing 288°, and Gunung Raksa bearing 205°. This berth is 0.15 mile from the coastal reef.

A conservation area surrounds the island. Entry restrictions are not known. However, vessels that give its headland a distance of about 2 miles wide, pass clear of the area.

Selat Panaitan (Prinsen Strait) (Behouden Passage), between the S extremity of Pulau Panaitan and Tanjung Lajar on Jawa, is free of dangers. The Pulau Panaitan shore should not be approached within 1 mile because of rocks off its S extremity. These dangers are marked by surf and vessels should use extreme caution when navigating in this area.

**Tanjung Lajar** (Tanjung Lajar) (6°45'S., 105°13'E.) lies about 2.5 miles SW of the NW extremity of Pulau Peucang, and is also the S entrance point of the SW end of Selat Panaitan

(Behouden Passage). It is a low, rocky point which rises gradually.

A light is shown from a 30m high grey metal framework tower situated on the point.

Tanjung Guakolak (Tanjung Goeakolak), the SW point of the peninsula of Menanjung Ujung-Kulon, lies about 6 miles SSE of Tanjung Lajar. Rocks, above and below-water, extend about 0.5 mile off the coast between the above two points.

**Tanjung Cangkung** (Tanjung Tjangkoeang) (6°51'S., 105°16'E.), a little over 1.5 miles SE, is the southernmost point of the peninsula.

**Caution.**—An explosives dumping ground lies 11 miles W of Tanjung Guakolak.

## Islands in the North and Northwest Part of Selat Sunda

**4.19 Pulau Sangiang** (5°58'S., 105°51'E.) is located in the middle of the narrowest part of Selat Sunda, and is easily identified. Pulau Sangiang is designated a conservation area of flora and fauna. From a distance it appears to consist of several islets. There are some hills along the SW side, the highest having an elevation of 153m; on the N side there is a plain.

The S extremity of the island is marked by a light.

The N and E coasts are fringed by a narrow reef; on the SE side the reef projects 0.3 mile, and is often marked by heavy surf. From the middle of the SW side, a reef extends 0.1 mile, otherwise, this side is clear. A rock lies close off the W extremity of the island, and another off the S extremity.

A bank of sand, with depths of 13 to 36m, extends 7 miles SW from Pulau Sangian, affording good anchorage. An underwater volcano is reported to lie 6.5 miles SSW of the island.

The SW current, which runs with great force along the NW and S sides of the island, causes heavy tide-rips. An eddy, which sets strongly inshore, is formed in the bay on the SW side. The depths in the bay are irregular. Pulau Sangiang is a good radar target up to 25 miles.

**Trumbu Koliot** (Kalihat) (Stroomklip) (5°55'S., 105°49'E.), a rock above water and visible at 3 miles, lies nearly 2 miles NNW of the W extremity of Pulau Sangian. The rock always breaks.

There is deep water on all sides at a distance of about 0.3 mile. South and W currents are strong around Terumbu Koliot and with opposing winds, there are tide-rips and patches of discolored water that sometimes create the impression that Terumbu Kalihat and Pulau Sangiang are connected by a ridge under water, which is not the case.

A current with a rate of 6 knots has been observed abreast Terumbu Kalihat. A depth of 14.6m was reported 0.75 mile ESE of the rock.

**Pulau Tempurung** (Tampurung) (5°54'S., 105°56'E.), a steep rock, 70m high and covered with vegetation, lies nearly 5 miles NE of Pulau Sangiang. The rock can be seen from distances up to 20 miles. The water is deep around the rock. A light from which a racon transmits stands on the highest point of Pulau Tampurung. The rock has been reported to be a good radar target at a distance of 15 miles.

**Terumbu Gosa** (Winsorklip) (Winsor Rock) (5°53'S., 105°55'E.), about 1.5 miles NW of Pulau Tampurung, is a

steep-to rock, with a least depth of 3.8m; it is marked by discoloration and tide-rips.

## Islands and Dangers on the North Side of Selat Sunda

**4.20 Pulau Rakata** (Pulau Krakatau) (6°09'S., 105°26'E.), an active volcano, is located in the middle of Selat Sunda, about 25 miles WSW of the S extremity of Pulau Sangiang. The highest part of Pulau Rakata culminates in a peak 813m high, falling steeply away to N to form an arc-shaped cliff which is actually a portion of a huge crater lying between Pulau Rakata and Pulau Sertung, to the NW. Pulau Rakata was reported to be a good radar target at a distance of 20 miles.

Volcanic activity has been observed on Rakata. It was reported that the island had extended 0.5 mile E.

In the event of a threatened eruption on Pulau Rakata, Jakarta radio station will broadcast the necessary warning in Indonesian and English text.



**Pulau Rakata (Pulau Krakatau)**

**Pulau Sertung** (6°05'S., 105°23'E.), about 3.5 miles NW of Pulau Rakata (Pulau Krakatau), is also an active volcano. Pulau Rakata-kecil (Lang Eiland), 1.75 miles N of Pulau Rakata, attains a height of 147m. A reef extends about 0.5 mile from the W shore of the island.

Between Pulau Rakata-kecil and Pulau Sebesi to the N, and also as far as 5 miles NE of Pulau Rakata-kecil, there are a number of reefs which are the higher parts of an extensive bank formed during a major eruption of Pulau Rakata. The sea is reported to continually break on these reefs.

**Sea Rock** (Zeeklip) (Terumbu Mohammad Basir) (5°58'S., 105°23'E.), nearly 5 miles NNW of the N extremity of Pulau Sertung, are two steep-to rocks, close together, which are visible from a considerable distance.

**Pulau Sebesi** (5°58'S., 105°29'E.) lies about 7 miles NE of Pulau Sertung. Pulau Sebesi appears as a mountain with two peaks, the SW, 843m high, is the highest.

**Pulau Sebuku** (5°54'S., 105°30'E.) is separated from Pulau Sebesi to the SSW by a clear, deep channel about 1 mile wide. Pulau Sebuku is reef-fringed. A heavy surf often marks this reef and there are a number of above-water rocks. A light is shown from the N extremity of the island.

**Caution.**—Because of volcanic activity, the area between Pulau Rakata (Pulau Krakatau) and Pulau Sebesi, 10 miles N, must be considered as unsafe and routes outside these islands should be taken by vessels.

## Northern Side of Selat Sunda

**4.21 Tanjung Tua** (Varkens Hoek) (5°55'S., 105°43'E.), the southeasternmost point of Sumatera, is a high, round, rocky point that is heavily wooded and connected to higher ground by a low barren ridge.

A light is shown from Tanjung Tua. From the W, the SW end of **Pulau Kandangbalak** (5°53'S., 105°46'E.) appears to be behind Tanjung Tua, when the latter bears less than 077°.

When Tanjung Tua bears 071°, the S end of **Pulau Panjurit** (Hout Island) (5°53'S., 105°47'E.) comes into view. As both these island extremities bear some resemblance to Tanjung Tua, it is possible to mistake one of them for the point when approaching from W. From E, Tanjung Tua is easily identified.

**Terumbu Serdang** (Batumandi) (5°53'S., 105°42'E.), 1.5 miles NW of Tanjung Tua, is a small islet, 2m high, which can be seen from a distance of about 3 miles. There are depths of 30 to 50m close around it.

The steep coast trends about 8.5 miles W and NW from Tanjung Tua to **Tanjung Kelapa** (5°50'S., 105°36'E.).

## Teluk Lampung

**4.22** Teluk Lampung is the extensive indentation between the middle and eastern peninsulas of this portion of the coast of Sumatera. Its entrance, between Tanjung Kelapa to the E and **Tanjung Tikus** (5°48'S., 105°13'E.) to the W, is about 23 miles wide.

Teluk Lampung is available to deep-draft vessels. It is generally steep-to on the E shore. Conspicuous mountains lie on the W shore of Teluk Lampung. Spurs from these mountains descend to the coast forming a number of bays, with many good anchorages, on the W shore, although there are numerous dangers.

This shore is marshy in places and there are some large villages, though seldom visible from seaward. During the Northwest Monsoon, safe anchorage can be taken in a number of places off the W shore.

Fishtraps may be encountered off the coasts of both sides of Teluk Lampung.

It was reported that many fish traps and huts also extend to the center of Taluk Lampung. Crossing the bay would require keeping as far S as the latitude of Medusa Reef.

A naval exercise area occupies much of the SW part of the bay; the limits can be best seen on the chart.

**4.23 Kepulauan Legundi**, on the W side of the entrance to Teluk Lampung, consist of six islands. **Pulau Legundi** (Pulau Legoendi) (5°50'S., 105°14'E.), 343m high, is the largest of the group. These islands are all densely wooded, hilly, and mostly fringed by narrow reefs which are steep-to on the S sides. The passages between the various islands are not recommended for large vessels.

Anchorage may be taken by vessels, with local knowledge, in either of two bays indenting the NW shore of Pulau Legundi. Shelter is provided from the prevailing W and SE winds.

**Selat Legundi** (Straat Legoendi) (5°50'S., 105°12'E.) is the channel trending NE between the coast of Sumatera and Pulau Legundi into Teluk Lampung. This clear, deep waterway is used by vessels from the W proceeding to the head of Teluk Lampung.

**Medusa** (5°46'S., 105°16'E.), a coral reef, with a least depth of 4.9m, lies off the NE entrance to Selat Legundi and 2 miles NE of Pulau Saserot. It is sometimes marked by discoloration and ripples. It never breaks and is dangerous to navigation.

**Pulau Serdang** (5°49'S., 105°23'E.), a high, steep, brush-covered island lies about 5 miles E of the E extremity of Pulau Legundi.

The intervening channel to the W is clear and deep. A light is shown from Pulau Serdang.

It was reported that a tall tower with a red top, similar to a radio tower, and several white buildings were seen on the island.

**Kepulauan Tiga** (Pulau Tiga) (5°49'S., 105°33'E.), on the E side of the entrance of Teluk Lampung, about 4.3 miles WNW of Tanjung Kelapa, is a group of rocky islets.

The NW islet is the largest and from its NW side a reef, usually marked by breakers, extends 0.25 mile offshore. A light is shown from the SE island of the group.

Although vessels can pass on either side of Kepulauan Tiga, there is a strong current in the vicinity.

The coast from **Tanjung Kelapa** (5°50'S., 105°36'E.), NW and N to Kalianda Road, a section 5.5 miles long, rises steadily to a conspicuous twin-peaked summit, **Gunung Rajabasa** (Radjabasa) (5°47'S., 105°38'E.).

Anchorage can be taken off the village **Canti** (Tijanti) (5°48'S., 105°35'E.), about 3.5 miles S of Kalianda Road, in a depth of 14.9m, mud, with the S islet of Kepulauan Tiga (Pulau Tiga) bearing 236°.

**4.24 Kalianda Road** is the roadstead off the village **Kalianda** (5°45'S., 105°36'E.) ([World Port Index No. 50370](#)). It affords anchorage in a depth of 11.8m, mud, with the flagstaff at the root of the pier in line with the head of the pier, bearing 112°.

The coast between Kalianda and **Teluk Belantung** (Loeboek Anchorage) (5°42'S., 105°33'E.), 3.5 miles NW, is low and fringed by a reef. Teluk Belantung is free of dangers but affords no sheltered anchorage.

Between Teluk Belantung and Panjung (Pandjang), nearly 19 miles NW, the coast is high and fringed by a steep-to coastal reef on which the sea breaks heavily in W winds.

**Taharan Coal Terminal** (5°29'S., 105°13'E.) is situated 3 miles SSE of Panjang. The berth is 170m long, depth of 12m, and lies between dolphins, 240m apart.



**Taharan Coal Terminal**

The largest vessel to use the berth was 40,000 dwt, with a length of 160m, a beam of 27m, and a draft of 8m.

**4.25 Panjang** (5°28'S., 105°19'E.) ([World Port Index No. 50380](#)) lies inshore of a natural breakwater of sand and coral, formed by an extension of the coastal reef on the NE side of the head of Teluk Lampung. Panjang is the largest seaport on the S end of Sumatera. It has a coastal radio station.

**Depths—Limitations.**—The depths are 12.2 to 15.8m in the entrance of Panjang, and from 9 to 13m in the harbor.

Ocean-going vessels can be berthed at two mooring buoys; these moorings buoys are situated within the harbor in a depth of 9m.

A sea-island berth, with a depth of 12m alongside, was reported available inside the harbor. Tankers from 2,000 to 16,000 dwt and from 80 to 150m long can be accommodated. Berthing is restricted to daylight hours, but unberthing can be done at any time.

General cargo quays extend along the SE and NE sides of the harbor. Berthing information is given in the accompanying table.

Pamjang Berthing Information				
Quay	Length	Depth alongside	Maximum vessel	
			Size	Length
A	172m	8.0m	15,000 dwt	160m
B	210m	5.8m	6,500 dwt	110m
C	138m	4.0m	2,500 dwt	75m
D-1	200m	9.0m	28,000 dwt	200m
D-2	200m	10.0m	28,000 dwt	200m

**Pilotage.**—Pilotage is compulsory. Pilotage service is available 24 hours. Pilots require at least 8 hours notice for docking and 4 hours for undocking and shifting.

**Anchorage.**—Anchorage can be taken 1.5 miles SW of the harbor entrance.

**Directions.**—Panjang is entered by way of a channel leading in from NW around the N end of the natural breakwater. The fairway is about 137m wide.

**Caution.**—Lighted buoys mark the N extremity of the natural breakwater and the entrance to the harbor. A light is shown from the NE extremity of this breakwater.

Because of the existence of unlighted fishing stakes, dangerous to navigation, Panjang should be approached in daylight.

**4.26 Telukbetung** (5°27'S., 105°16'E.) is a town on the NE side of the mouth of the Wai Kuripan River at the W side of the head of Teluk Lampung. It is located about 3.3 miles WNW of Panjang.

Although Telukbetung has considerable frontage on Teluk Lampung, the port facilities are suitable only for native craft. Panjang serves as the port for Telukbetung.

**Anchorage.**—The small coastal vessels sometimes make use of Telukbetung, usually anchoring closely as possible to **Pulau Pasaran** (5°28'S., 105°16'E.). The depths are less than 11m, at distances closer than 0.25 mile to the island.

The W shore of the head of Teluk Lampung between Telukbetung and **Tanjung Tambikil** (5°31'S., 105°16'E.), 4 miles S, is encumbered with islets, reefs, and sandbanks. Pulau Tangkil, 56m high, covered with coconut palms, lies 0.5 mile NE of Tanjung Tambikil.

There is a clear passage between the reefs fringing Pulau Tangkil and the coast W.

Pulau Kubur, 25m high, and Pulau Pasaran, a low reef-fringed islet, lie close offshore 1.5 miles and 2.75 miles NNW, respectively, of Pulau Tangkil.

**4.27 Pamunggutan** (5°29'S., 105°16'E.) is a bank of sand, coral, and stones, which dries 1.2m about 0.75 mile NE of Pulau Kubur.

A number of reef patches lie within 0.5 mile of Pamunggutan.

A light is shown from a white metal frame-work structure on a reef 0.6 mile ESE of Pulau Pasaran.

Between Tanjung Tambikil and **Pulau Maitem** (5°36'S., 105°15'E.), a coastal section about 4.5 miles long, the W shore is alternately hilly and marshy, and is fringed by coral to a distance, in places, of 0.5 mile.

**Pulau Tegal** (5°34'S., 105°17'E.) lies about 2 miles NE of Pulau Maitem. It attains a height of 117m and is entirely covered with coconut trees.

A reef, with a sandbank above-water on its W side, lies between Pulau Tegal and the W coast; there is a narrow but deep channel on either side of this reef.

**Caution.**—A prohibited anchorage area, best seen on the chart, lies N of Pulau Tegal.

**4.28 Pulau Kelagian**, 281m high, lies about 2.3 miles S of Pulau Maitem. **Teluk Ratai** (Ratai Baai) (5°36'S., 105°13'E.), the largest and most important bay on the W side of Teluk Lampung, indents the coast between these points. There is a clear channel on either side of Pulau Kelagian.

The N entrance point of the bay lies 1.75 miles NNE of the N extremity of Pulau Kelagian. Pulau Kelagian lies 0.6 mile NE of the S entrance point of the bay.

In the bay itself there are no dangers, except two drying reefs which lie within 0.5 mile of the NW extremity of Pulau Kelagian and which are always marked by discoloration.

Anchorage may be obtained off **Piabung** (Piapoeng) (5°37'S., 105°10'E.), a village near the head of the bay, in a depth of 13m, 137m offshore. There is a small pier, suitable for lighters, at Piabung.

**Pulau Puhawang** (Poehawang) (5°41'S., 105°13'E.), the largest island in Teluk Lampung, lies about 1.5 miles S of Pulau Kelagian. The passage N of the island presents no difficulty to vessels with local knowledge. A reef, with a depth of 1.5m, lies in the N entrance to this channel, 0.5 mile NNW of the N extremity of Pulau Puhawang.

Pulau Puhawanglunik is connected to the E side of Pulau Puhawang by a drying reef. A patch, with a depth of 11m, lies 1 mile SSE of Pulau Puhawanglunik.

Teluk Punuh (Poendoeh Baai) is the area about 1 mile wide between Pulau Puhawang and the shore of Teluk Lampung to the W, NW, and SW. The mainland shore is marshy and through its SW part flows the Wai Pundu, a river with a mudbank, which is continually extending off its outlet.

**4.29 Teluk Pedada** (Pedada Baai) (5°45'S., 105°13'E.) is the southernmost of a number of recesses in the W shore of Teluk Lampung. Several islets lie in the entrance to, and within Teluk Pedada. Detached reefs in the bay, most of which lies in the N part, are marked by surf. A reef, with a depth of 2.7m, lies in about the middle of the entrance to Teluk Pedada.

Anchorage is available on the W side of **Ujung Pengrangan** (5°46'S., 105°12'E.), the S side of the entrance to Teluk Pedada. Anchorage should be taken only by those possessing local knowledge.

Close SE of the S entrance to Teluk Pedada is **Tanjung Tikus** (5°48'S., 105°13'E.), the W entrance point of Teluk Lampung.

**Teluk Peper** (Peper Baai) (5°48'S., 105°13'E.), entered between Tanjung Tikus and Tanjung Belantung, 1.5 miles WSW, has a noticeable steep group of rocks in the middle, with some others close off its W shore.

There is nearly always a turbulent sea in the bay, but when there is little swell, landing can be effected in a small cove with a sandy beach N of Tanjung Belantung.

**Tanjung Tuntungkalik** (5°48'S., 105°05'E.) lies 6.5 miles W of Tanjung Belantung. The intervening coast is steep, inaccessible, and offers no anchorage.

## Teluk Semangka

**4.30 Teluk Semangka**, the W indentation of the S coast of Sumatera, is entered between Tanjung Tuntungkalik and **Tanjung Cina** (5°56'S., 104°44'E.), 23 miles WSW and is entirely open to SE winds. When these winds are blowing, it affords anchorage in the N part. The bay extends nearly 34 miles in a NW direction from Tanjung Tuntungkalik.

The E shore is steep and affords opportunity for anchorage in depths from 30 to 50m, 2 miles offshore.

The W side is steep-to with depths of 30 to 50m within 0.5 mile. Local knowledge is advisable for vessels visiting any port, village, or anchorage on either side of Teluk Semangka.

The mornings are often misty in the entrance area and it's difficult to take bearings on the NE side of Teluk Semangka. The only prominent marks visible are the steep, rocky islets **Pulau Hiu** (Hioe) (5°45'S., 105°01'E.) and **Pulau Tuntungkalik** (5°48'S., 105°05'E.).

**Gunung Tanggamus** (5°26'S., 104°40'E.), at the head of Teluk Semangka, is 2,101m high with a sharp cone.

**Pulau Tabuan** (5°51'S., 104°51'E.), an island near the middle of the entrance of Teluk Semangka, is steep-to and densely wooded. It rises in its SE part to a height of 671m and appears sharp from S or N. Except on the NE side, the island is fringed by a steep-to bank. On the SE side of the island this bank extends 2.5 miles E, with depths of less than 30m. Anchorage can be taken on this bank, and also off a village near the NW extremity of the island.

The Teluk Semangka Oil terminal consists of two permanently-moored storage tankers in depths of 59m. The tanker *Burmah Enterprise* (ULCC) stores crude oil and industrial fuels and is moored 4 miles S of Kotaagung. The *Energy Renown* (VLCC), which stores gas, oil, and kerosene, is moored 4 miles SW of Kotaagung.

Tankers up to 275,000 dwt, with a maximum length of 350m and 17m draft, can berth alongside the storage vessels. Port radio at Kotaagung operates on VHF at all times.

Pilotage is compulsory. Pilots are embarked the same as in Panjang. Anchorage can be obtained in the vicinity of the tankers in depths of 20 to 40m, good holding ground.

A mooring master, compulsory for vessels berthing alongside a storage tanker, boards in the anchorage. Berthing is carried out only in daylight, though vessels are occasionally unberthed at night. Several tugs are available.

**4.31 Teluk Kiluan** (Kiloean) (5°46'S., 105°06'E.), on the N side of Tanjung Tuntungkalik (5°48'S., 105°05'E.), affords a good anchorage at the E entrance to Teluk Semangka, although there is little room to swing; vessels lie here sheltered from all winds.

**Pulau Tuntungkalik**, a steep, rocky islet lying 0.25 mile SW of Tanjung Tuntungkalik, the S entrance point, is a good landmark. **Pulau Kiluan** (5°47'S., 105°06'E.) lies in the middle of the entrance.

A coral reef, which dries, extends about 0.1 mile from the N shore of the bay. A small detached reef, which dries at the head of the bay, is usually marked by discoloration.

**Directions.**—In entering the bay a vessel should pass S of the rocks extending SW from Pulau Kiluan, and then proceed in mid-channel between that islet and the SE shore of the bay, and somewhat closely off a steep point E of Pulau Kiluan.

An anchorage position should be selected by eye, giving the coral reef extending from the N shore of the bay a good berth. Teluk Pegadungan, close N of Teluk Kiluan, is too exposed to afford anchorage.

**Pulau Hiu** (Hioe) (5°45'S., 105°01'E.) is a rocky, steep-sided island about 3.5 miles NW of Teluk Pegadungan. This wooded island is a useful mark, and is visible up to 15 miles.

**Teluk Umbar** (Teluk Oembar) (5°43'S., 104°54'E.), entered about 7 miles NW of Teluk Pegadungan, affords anchorage for small vessels with local knowledge. The bay is exposed to the S swell.

Two steep rocky islets, covered with vegetation, lie close offshore W of the entrance, and there are some above-water rocks on both sides of the bay. The bay should be entered in mid-channel. The village Umbar stands in the NE corner of the bay.

**Labuhan Tengor** (Tengor Anchorage) (5°40'S., 104°54'E.), the indentation 5 miles NW of Teluk Umbar, is not desirable as an anchorage. Some drying rocks lie on the W side of the entrance.

The coast, 19 miles NW of Labuhan Tengor, may be approached closely except for off **Tanjung Badak** (5°37'S., 104°49'E.), 5.5 miles NW of Labuhan Tengor. A dangerous patch of coral, with a depth of 3.6m, not marked by discoloration, lies 1.5 miles SW of Tanjung Badak.

The village **Kotaagung** (5°30'S., 104°37'E.) is situated on the beach at the head of Teluk Semangka, 14 miles NW of Tanjung Badak. There is a pier at Kotaagung.

Anchorage may be obtained in a depth of 9m, mud and sand, 0.5 mile offshore SSW of the pier. Rocky patches lie in the following positions relative to the pier: 1 mile WSW with 0.3m; a little less than 1 mile SW with 8.8m; 1.5 miles SE with 15m. A flagstaff behind the village is a useful mark.

At the head of Teluk Semangka, between Kotaagung and **Tanjung Betung** (Betoeng) (5°34'S., 104°33'E.), 5.5 miles SW, the land is low and marshy, but wooded with high trees. Through the valley, formed between them by mountain ranges, flow several rivers.

**4.32 Betung** (5°33'S., 104°33'E.), one of the largest villages on the W shore of the bay, is situated on the N side of Tanjung Betung. There is anchorage in a depth of 31m, 0.15 mile offshore, with the village bearing 240°. Above-water rocks and discolored water extend 0.1 mile offshore.

**Wainipah** is a village about 2.75 miles SSE of Betung. Coral reefs extend 0.5 mile offshore between the two villages.

Anchorage can be taken off Wainipah in 20m. The anchorage should be approached by sounding and having the low point immediately N of the village bearing 316°.

A light is shown 0.75 miles N of the village.

**Tanjung Gunungdalam** (5°44'S., 104°39'E.) is a high point 10 miles SE of Wainipah. There is anchorage off Karangberak, a village on the S side of the point, in a depth of 33m, 0.3 mile offshore. A light is shown from this point.

**Tanjung Batoeloenik** (5°51'S., 104°43'E.) is a less than 7.5 miles SSE of Teluk Gunungdalam.

**Teluk Tampang** (Tampang Baai) (5°52'S., 104°43'E.), entered between Tanjung Batoeloenik and Tanjung Cina (5°56'S., 104°44'E.), 6 miles S, is entirely open to SE winds but affords good anchorage in a depth of 25m, sand, NE of Tampang, a village situated near the head of the bay. Teluk Cina, the W entrance to Teluk Semangka, is a low point which is well outlined when seen from seaward. A light is shown from this point.

The coast between Teluk Cina and **Cukuh Balimbing** (5°56'S., 104°33'E.), 10.5 miles W, is reef-fringed. A light is shown from Cukuh Balimbing. Approaching this coast in thick weather, when the land can not be seen, the soundings are a good guide but it is advisable to keep in a depth of not less than 40m.

A reef, with a depth of 1.5m and marked by breakers, lies 1 mile offshore and 2.75 miles ESE of **Tanjung Rata** (5°57'S., 104°35'E.), the southernmost point of Sumatera, located 2

miles SE of Cukuh Balimbing. There is a patch, with a depth of 8.8m, 0.5 mile SSW of Tanjung Rata. A patch, with a depth of 11m, lies 3 miles S of the same point, with depths of from 12.8 to 14.6m between it and the shore.

## Jawa—South Coast

**4.33** The S coast of Jawa is high and consists of steep rocks and rugged points. This desolate barren coast has great depths inshore. There are some bays and harbors which afford shelter in both monsoons.

Jawa is relatively narrow; the prominent mountains on the island serve as good landmarks for its S and N coasts. Some of the mountains can be identified up to 75 miles during the Northwest Monsoon.

During the Southeast Monsoon these mountains are usually concealed by the hazy atmosphere, except occasionally in the early morning.

Heavy swells break unceasingly on all exposed points and roll into the bays and some harbors. There are a few harbors which afford shelter during either monsoon. Cilacap (Tjilatjap) is the most important port on the S coast of Jawa.

**Winds—Weather.**—Southerly winds prevail along the S coast of Jawa during all months except January. The Southeast Monsoon commences in April and lasts until September; the wind occasionally blows from the SSW or SW at this time.

In October the mean direction of the wind is S, in November and December SSW, and in January WNW or NW.

A retrograde motion begins in February, and in March winds from the SW occur. These winds sometimes shift to NW or SE. This unsettled condition lasts until the latter half of April.

**Tides—Currents.**—Currents run usually to the SE, being strongest during the Northwest Monsoon and weak at other times. The vertical tide movement is mixed with a predominantly semidiurnal character.

In general, the tidal currents set W on the rising tide and E on the falling tide.

**Aspect.**—Among the mountains in the W part of the S coast of Jawa are **Gunung Salak** (6°43'S., 106°44'E.) 2,211m high, with Gunung Halimun, 1,744m high, and Gunung Sangabuwana, 1,919m high, 13 miles SW and 17.5 miles W, respectively.

Gunung Pangrango, 3,019m high and shaped like a truncated cone, rises 14 miles ESE of Gunung Salak, with Gunung Gede, 2,958m high, close SE. A white column of smoke is often seen rising from the crater on the NW peak of Gunung Gede.

**Caution.**—The S coast of Jawa, between **Tanjung Guakolak** (6°50'S., 105°15'E.) and Tanjung Sodong (6°52'S., 105°32'E.), is similar in appearance, during hazy weather, to the coast NW, including **Pulau Panaitan** (6°35'S., 105°13'E.).

The long narrow isthmus connecting Menanjung Ujung-kulon with the Jawa mainland has been mistaken at a distance for the entrance of Selat Panaitan (Prinsen Straat) (Behouden Passage).

**4.34 Tanjung Cangkuang** (Tanjung Tjankoeang) (6°51'S., 105°16'E.) is the southernmost point of Menanjung Ujung-kulon isthmus. A 388m peak rises just N of the point. This area should not be approached within 2 miles.

The coast between Tanjung Cangkuang and **Ujung Sinini** (7°00'S., 106°21'E.), about 68 miles E, is fronted by a sandy

beach upon which the sea breaks at all times. There are a few scattered villages along the coast, and dune formations which are subject to continuous change.

**Tanjung Tereleng** (6°51'S., 105°25'E.), 9 miles E of Tanjung Cangkuang, is a 49m high reef fringed cape extending almost 1 mile from the coast. A prominent tree is located in the middle of Tanjung Tereleng.

**Tanjung Sodong** (6°52'S., 105°32'E.), located about 7 miles E of Tanjung Tereleng, is a sandy point backed by hills.

**Tanjung Panto** (6°51'S., 105°54'E.) is the E end of a promontory, 1.5 miles long, and is fronted by a drying reef which extends 0.25 mile offshore.

Anchorage may be obtained during the Northwest Monsoon in the bay N of Tanjung Panto, in depths of 11 to 15m. The holding ground is good, but a considerable swell frequently sets in round the point.

## Off-lying Islands

**4.35 Pulau Deli** (Klapper Eil) (7°01'S., 105°32'E.), an uninhabited island, 48m high at its NW end, lies 7 miles S of Tanjung Sodongrand and is thickly wooded.

Pulau Tinjil (Pulau Tindjil) (Trouwers Eil), about 12 miles E of Pulau Deli, is similar in appearance to Pulau Deli. Between these islands and the coast of Jawa, there is a bank with depths of 27 to 55m, coarse sand and mud bottom.

From Tanjung Panto, the coast continues low and sandy and in its W part it is backed by sand dunes for 9 miles E, where a narrow drying reef extends 1 mile S from the coast. It then turns SE for 14 miles to **Ujung Karangtaraje** (Karangtaradje) (6°57'S., 106°14'E.), and is mostly fringed by a drying reef. Anchorage may be obtained by those with local knowledge in the bay close W of Ujung Karangtaraje, in depths of 11 to 16m, sand.

Teluk Pelabuhan Ratu (Wijnkoops Baai), entered between **Ujung Sinini** (7°00'S., 106°21'E.), 7.5 miles ESE of Ujung Karangtaraje, and Ujung Karangterang, a point 10 miles SE, is backed by steep wooded mountains.

In Teluk Pelabuhan Ratu, rugged points project in places from the shore with a few rocks close inshore. A stream flows into the sea at the head of the roadstead with the village of **Pelabuhanratu** (6°59'S., 106°32'E.) at its entrance, where there is a small T-head pier. Coastal vessels call during both monsoons.

**Teluk Ciletuh** (Teluk Tjiasem) (Zand Baai) (7°11'S., 106°26'E.), just S of the larger bay, is small in extent and relatively shallow. It provides good shelter during the Southeast Monsoon for vessels with local knowledge.

Castorklip (Karang Castor) is a small rock awash lying in the middle of the bay, 1.5 miles SSW of Ujung Karangragok, the N entrance point of Teluk Ciletuh. It can only be identified when there is a swell.

Between Teluk Ciletuh and Ujung Genteng, there are several bights with white sandy beaches, separated by prominent points formed by spurs from the hilly land behind. Vessels should give this part of the coast a berth of at least 1 mile, as above and below-water rocks lie up to 0.75 mile offshore.

**4.36 Ujung Genteng** (7°23'S., 106°24'E.) ([World Port Index No. 51230](#)), 12 miles S of Teluk Ciletuh, is a low peninsula with tall trees; it is very conspicuous from westward.

A sandbank, with numerous rocks, fringes the point and extends 0.4 mile S.

The S part of this sandbank is prolonged in a SSE direction for about 0.75 mile by a rocky ridge, with a depth of 6.9m at its outer part. During the Southeast Monsoon there is heavy surf on the outer end of the spit, but during the Northwest Monsoon there is hardly a ripple during calm weather. Ujung Genteng should not be rounded from the E in depths of less than 37m.

A 27.4m depth lies 8.3 miles WNW of Ujung Genteng.

An inlet indents the coastal reef on the W side of the peninsula. The inlet is narrow and has a fairway width of less than 91m at the entrance. A pier extends 125m in a S direction to the edge of the sandbank on the W side of the inlet. There is a depth of 6.2m alongside. Two mooring buoys are moored E of the pier.

**Tides—Currents.**—A strong tidal current may be encountered off the inlet, but the rate has not been determined. The maximum rate of the S current occurs at the time of semidiurnal high water, and that of the N current at low water.

A beacon stands on the neck of the peninsula at its head near a prominent shed with a zinc roof. The W side of the inlet is marked by a beacon and two piles, and the E side by a beacon.

Anchorage may be taken, during the Southeast Monsoon, off the entrance to the inlet in a depth of 20m, 0.45 mile W of Ujung Genteng. It may also be taken farther seaward in depths of 26 to 29m, but a heavy swell exists here.

**Directions.**—Approaching from W, steer for Ujung Genteng bearing more than 090° and when the beacon at the head of the inlet bears 029°, steer for it and pass between the beacons on either side, which leads to the pier.

The coast between Ujung Genteng and **Teluk Cilauteureun** (Tjilauteureun) (7°40'S., 107°41'E.) is low, straight, and backed by sand dunes up to 84m high in the W and central parts.

Between Teluk Cilauteureun and **Ujung Madasari** (7°47'S., 108°30'E.), the coast is low, wooded, cultivated, and backed by low hills covered with rubber plantations. There appears to be no off-lying dangers off the previously mentioned stretch of coast, though reefs, on which the sea breaks with violence, extend up to about 0.5 mile from the prominent points. In every bay heavy surf rolls up to the white sandy beaches.

## Teluk Penanjung

**4.37 Tanjung Cimanggu** (Tanjung Tjimanggu) (7°44'S., 108°40'E.) is the S extremity of a small peninsula which separates Teluk Parigi from Teluk Citanduy (Teluk Maurits). These bays collectively form Teluk Penanjung.

Teluk Parigi offers good shelter during the Northwest Monsoon. Vessels can anchor in 18.3m with Ujung Citanduy bearing 199° and Tanjung Cimangu bearing 091°. During the Southeast Monsoon, vessels can anchor in the E part of the bay, off the small peninsula.

Teluk Citanduy (Teluk Maurits) offers good shelter during the Northwest Monsoon. Vessels can anchor in 14.6m or 18.3m, with the SE side of the small peninsula bearing 186° and **Tanjung Besek** (7°44'S., 108°47'E.) bearing 105°. The latter point is the SW extremity of Nusa Kambangan, a long and narrow island.

**Nusa Kambangan** (7°44'S., 108°55'E.) is separated from the S coast of Jawa by very narrow channels. The W, S, and E sides

of the island are steep and rocky. The channel N of the W end of the island expands into a large lagoon, with general depths of 0.9m and numerous drying patches. A light is shown from a 32m white stone tower and a racon transmits from **Gunung Cimiring** (Tjimiring) (7°47'S., 109°02'E.), the SE end of Nusa Kambangan.

An offshore tanker terminal, consisting of an SBM and marked by lighted buoys, is situated 4 miles SE of the light. A submarine pipeline, marked by lighted buoys, connects the terminal to the shore.

## Teluk Penyu and Cilacap Inlet

**4.38 Teluk Penyu** (7°45'S., 109°04'E.) is an open bight between Nusa Kambangan and Tanjung Karangbata (Tanjung Karang-boto) (7°46'S., 109°24'E.).

Approaching Teluk Penyu from S, **Gunung Slamet** (7°14'S., 109°13'E.), 3,420m high, is an excellent landmark in clear weather. It should be steered for bearing less than 011°, which leads E of the 8.5m depths reported to lie 3.5 miles E and SW, respectively, of Cimiring lighthouse.

Care should be taken that the isolated group of mountains N of Tanjung Karangbata, the E entrance point to Teluk Penyu which has the appearance of an island from a distance, should not be mistaken for Nusa Kambangan.

Cilacap, entered between the E end of Nusa Kambangan and the S coast of Jawa, is the most important harbor on this coast. It affords the best anchorage of this stretch of coast and vessels can lie here in safety during both monsoons.

**Cilacap Inlet** (7°45'S., 109°03'E.), the narrow channel to Cilacap, leads along the NE side of Nusa Kambangan.

The town of Cilacap is situated on the N and E banks of **Kali Donan** (7°44'S., 109°00'E.), close within the entrance to the inlet.

A dangerous wreck lies in position 7°47'S., 109°10'E.

## Cilacap (7°44'S., 109°00'E.)

World Port Index No. 51220

**4.39** Cilacap is a port of call for coastal and foreign shipping. There is a radio station at Cilacap. Extensive wharfage, with rail facilities, fronts the SW and W sides of the town. Mobile cranes are available for working cargo. The channel to Cilacap has been dredged and widened. Aids to navigation have been adjusted to reflect the channel limits.

**Winds—Weather.**—A gentle land breeze from the W or NW blows in during the morning hours. From the middle of July until the beginning of October there are continuous E winds which raise a high swell.

In August and September, these winds are accompanied by heavy rains and frequent storms, with no W or land breeze at all.

The climate cannot be considered healthful during the Northwest Monsoon. During the Southeast Monsoon, there are fresh breezes. The heaviest rainfall occurs from October to January, at which time it rains during 20 days of each month. The driest months are August and September, when rain falls about 11 days in each month. Heavy squalls, during the

intermediate period between monsoons, sometimes impedes the working of cargo.

**Tides—Currents.**—In Cilacap Inlet, the tide is mostly semi-diurnal. Off the entrance to the inlet, there is an almost constant N stream. Along the axis of the channel, the current follows the line of the channel, but on both sides it passes over the shoals.

The flood current sets SW over the hard sand bank and then WSW. Because of the influence of the river Kali Donan, especially during the rainy season, the duration of the ebb is usually longer than that of the flood.

During neap tides, the current is usually 0.5 to 1 knot. At spring tides, this rate may increase to 2 to 4 knots and during the rainy season, the current has been known to attain a rate of 5 knots.

**Depths—Limitations.**—The channel is reported to have a minimum width of 170m from a position about 0.7 mile ENE of Tanjung Karangbolong to the W end of Pertamina Wharf; this portion of the channel has dredged depths of 14.5 to 12.1m.

Between Pertamina Wharf and the General Cargo Wharves the channel narrows to a width of 80m with a depth of 8m, after which the depth reduces to 5.7m in the reach to Donan Wharf.

The Crude Island Berth lies on the S side of the channel, about 1 mile W of Tanjung Karangbolong. It consists of two berths which can accommodate vessels up to 135,000 dwt with a maximum draft of 12m.

Pasir Besi Iron Wharf lies on the N side of the channel, about 1.5 miles WNW of Tanjung Karangbolang. The T-shaped wharf, with a 50m long concrete head, has a dolphin on each side. Vessels up to 186m long with a draft of 10.4m can berth there.

Pertamina Wharf lies on the N shore of the channel, about 0.25 mile WNW of the Iron Ore Wharf. It consists of a triple-headed, three berth wharf, with a total length of 860m. The wharf can accommodate tankers up to 35,000 dwt, with a maximum draft of 11m.

There are four wharfs situated on the E side of Kali Donan at the Puri Berths (General Cargo Wharves), which can accommodate vessels up to 10,000 dwt, with a maximum length of 114m and a maximum draft of 7m.

Vessels dock port side-to, except at the Crude Island Berths, where vessels are berthed bow upriver.

There is a turning basin close N of Crude Island Berths and S of Lighted Buoy No.13.

Berthing information is given in the accompanying table.

Cilacap—Berthing Information			
Berth	Length	Depth	Remarks
No. 1 (Adipati Donan)	120m	9m	Tanker discharge only.
No. 2 (Singo-meggolo)	134m	9m	
No. 3 (Cokro Wedono)	152m	9m	Under repair.

Cilacap—Berthing Information			
Berth	Length	Depth	Remarks
No. 4 (Mantri Tambak)	71m	6m	Maximum vessel length of 160m.

**Aspect.**—A white metal framework lighthouse, 15m high, stands 1 mile N of the iron ore piers. A prominent monument lies on the W side of Kali Jasa, 0.75 mile NW of the iron ore piers. A flagstaff and a monument lie close W of **Tanjung Sodong** (7°44.5'S., 108°59.5'E.).

**Pilotage.**—Pilotage is compulsory for all vessels over 150 grt. Pilots are available 24 hours for vessels up to 150m length overall. Vessels over 150m in length are restricted to movements in daylight hours only. Request for pilot should be made 6 hours in advance and 3 hours before departure.

A vessel arriving at night should not make the signal for a pilot until daybreak. The pilot usually meets vessels about 0.75 mile ENE of Tanjung Karangbolong. Ships can communicate with the pilots on VHF.

**Signals.**—Pilot signals are acknowledged by **Cimiring Lighthouse** (7°47'S., 109°02'E.); the information telephoned to the pilot station at Cilacap.

The answering signals made by the lighthouse are given in the accompanying table.

Cilacap—Pilot Answering Signals	
Signal	Meaning
Indonesian flag is hoisted at the signal yard.	The pilot is proceeding to board the vessel.
A ball, with two cones, points up, vertically disposed below.	Vessel wait outside until further notice.
Two cones, vertically disposed, bases together.	Vessel may enter without a pilot.
A ball, with a cone, point up, below it.	Pilot will not board vessel outside; proceed into Cilacap Inlet without a pilot until one is met.
A black ball between two cones, points up, vertically disposed.	Vessel cannot enter that day.

It was reported recently that the signals from the lighthouse were difficult to see.

**Anchorage.**—The outer anchorage, contained within a one mile square area, is centered 1.5 miles SE of Tanjung Karangbolong, in depths of 16 to 20m. Vessels also anchor between the anchorage area and the point, away from the wreck lying 0.2 mile ESE of the point.

**Caution.**—Rivers discharge into the bay carrying out trees and debris which cause discoloration of the water and dangers to navigation. Anchoring and trawling is prohibited in the vicinity of the submarine pipeline, laid across the harbor near the Iron Ore Wharf.

The 10m curve is located about 2 miles E of the E side of Cilacap. At this position the insular shelf is hard sand and shoals gradually to the shore. Two drying patches are located WNW of Ujung Karangbolong.

The entrance channel leads S of these patches and N of a narrow steep-to reef fringing the NE shore of Nusa Kambangan. Numerous wrecks lie in the inlet and harbor.

The dredged channel entered between Lighted Buoy No. 1 and Lighted Buoy No. 2 is moored less than a mile ENE of Tanjung Karangbolong. A pilot embarks in this vicinity. The channel is marked by lighted buoys (IALA Maritime Buoyage System Region A) and three sets of leading lighted beacons.

**Tanjung Krangboto** (Karangbata) (7°46'S., 109°24'E.), the E entrance point to Teluk Penyu, is the S extremity of a steep and high promontory. The low land on either side renders it prominent. Heavy surf makes it impracticable to land on the promontory and, as uncharted rocks may exist close inshore, it should be given a wide berth.

Kali Lukul enters the sea 14 miles E of Tanjung Karangbata. Cilicap radiobeacon transmits from a structure on the E side of the river.

## Tanjung Karangboto to Tanjung Bantenan

**4.40** The entire coast between Tanjung Karangboto and **Teluk Pacitan** (8°15'S., 111°05'E.), about 105 miles ESE, is inaccessible because of heavy surf. The W part between Tanjung Karangboto and the entrance of **Kali Opak** (8°01'S., 110°17'E.), 54 miles ESE, consists of a low plain fronted by sand dunes 9 to 16m high, behind which are numerous villages and paddy fields.

The E part of this stretch of coast is more mountainous, and the coast is steep and desolate. Dangers, other than those charted, may exist along this coast.

The only part of this coast which has been surveyed is E of 7°53'S., 110°01'E., to the entrance of **Kali Opak** (8°01'S., 110°17'E.), 16.5 miles ESE. Soundings off this stretch of coast show that the 200m curve lies approximately 7 miles offshore, the bottom being very regular within this depth, but rising abruptly near the coast.

Off the entrance to Kali Opak, the 20m line lies approximately 1.5 miles offshore on either side of the entrance. The average depth 3 miles offshore is 49m, but owing to the heavy swell it is inadvisable to approach the coast within 2 miles.

**Teluk Pacitan** (Patjitan) (8°15'S., 111°05'E.) is open to S winds and sea. It is entered between Tanjung Karangsemenda and **Tanjung Ngamber** (8°15'S., 111°06'E.), 1 mile E, and is difficult to identify from a distance. **Gunung Lawu** (7°37'S., 111°12'E.) 3,265m, and Gunung Tulah 1,134m high lie; respectively, 38 miles NNE and 15 miles N of Tanjung Ngamber.

Another mountain, 729m high with a jagged summit which is easily identified, rises 7 miles ENE of Tanjung Ngamber.

Under favorable conditions, a beacon standing on the summit of a hill 0.3 mile NE of Tanjung Ngamber, and another similar beacon about 0.6 mile N of Tanjung Karangsemenda, can both be seen from a considerable distance.

A village, fronted by a small jetty suitable for boats, is situated about 1.3 miles N of Tanjung Karangsemenda.

The N shore of the bay is formed by a sandy beach with low ground behind, but because of the heavy surf, it is impracticable to land.

Anchorage may be obtained in a depth of about 13m, sand and clay, about 0.2 mile SE of this jetty at the village.

Between Teluk Pacitan and **Teluk Panggul** (8°17'S., 111°26'E.), 20 miles E, the coast is high, rocky, and unsurveyed and should be given a wide berth.

Teluk Panggul, open to the S and SW, is a port of call for coastal vessels and only affords safe anchorage during the Southeast Monsoon.

Anchorage may be taken off the entrance to the river **Kali Konang** (8°17'S., 111°27'E.), in depths of 13 to 15m, but it is exposed to the heavy swell and landing is difficult.

It is preferable to anchor in **Teluk Jaketra** (Djaketra Baai) (8°17'S., 111°27'E.), 1 mile farther S, in depths of 9 to 13m, sand and clay. The bottom here rises gradually to a sandy beach where there are some warehouses.

**4.41 Pulau Konyelan** (Konjelan) (8°17'S., 111°27'E.) is an islet 42m high off the S entrance point to Teluk Jaketra. Pulau Karangmalang lies 0.3 mile further S. Both islets are fringed with reefs, and vessels are cautioned not to pass between them and the coast E. A group of islets and rocks lie 0.35 mile S of the E entrance point to Teluk Panggul.

The coast between the E entrance point to Teluk Panggul and the W entrance point to **Teluk Sumbreng** (8°20'S., 111°33'E.), 4.5 miles E, is indented, steep, wooded, and unsurveyed.

**Pulau Prendjono** (8°22'S., 111°29'E.), with Pulau Panehan 1.5 miles ESE, are two prominent rocky islets about 2.5 miles off the S coast of Jawa. Because of the lack of soundings in the vicinity of the islets, caution should be exercised.

Teluk Sumbreng is entered between two rocky, wooded points and the bay is free from dangers except for some rocks and islets, which extend 0.75 mile SW from the E entrance point.

**Anchorage.**—During the Southeast Monsoon, anchorage can be taken in 11 to 18.3m off a small bight, located about 0.5 mile N of the E entrance point. This anchorage, although somewhat sheltered from the prevailing monsoon, is exposed to heavy S swells.

Between the E entrance point of Teluk Sumbreng and **Ujung Siklopo** (Siklapa) (8°22'S., 111°44'E.), the SW entrance point to Teluk Prigi, the coast is rocky and indented by several bays, which are steep, wooded, and afford no suitable anchorage. This stretch of coast has not been surveyed and should be given a wide berth.

A light is situated on the SW entrance point of **Teluk Prigi** (8°21'S., 111°44'E.).

**Pulau Sarah** (8°23'S., 111°40'E.), a rocky islet with an above-water rock between it and the coast, lies about 1 mile offshore. A breaking rock lies 1 mile SSE of the islet. A breaking reef lies 2 miles SE of the islet.

## Off-lying Islets

**4.42** Several islets, which serve as good landmarks, front Teluk Prigi. They lie within 2.5 miles of the salient points. **Pulau Bababan** (Pulau Sebahaban) (8°24'S., 111°42'E.) consists of two high, needle rocks standing on a narrow reef

which is usually covered by high breakers. Pulau Sekel, 0.4 mile S of Pulau Bababan, is an above-water rock and is usually marked by heavy breakers. A below-water rock lies 0.6 mile W of Pulau Babadan.

**Pulau Batang** (8°25'S., 111°45'E.), 2.5 miles ENE of Pulau Bababan, is similar to Pulau Sekel.

Pulau Solimo is the largest of a group of five rocky, wooded islets lying on foul ground, 0.6 mile E of Pulau Batang.

**Pulau Tamengan** (8°22'S., 111°47'E.) is the largest of three rocky, wooded islets lying close together on an area of foul ground.

Pulau Sosari, 1 mile ENE of Pulau Tamengan, is the easternmost danger in the approach to Teluk Prigi.

**Teluk Prigi** (8°21'S., 111°44'E.), with high mountains W and E, is the clearest and safest bay on the S coast of Jawa. Within the entrance to Teluk Prigi, the depths decrease regularly to 7.3m near its head, where there is good holding ground of mud, clay, and sand.

The bay is divided into a W and N arm. **Labuan Damas** (8°20'S., 111°42'E.) indents the W arm and **Labuan Gangsa** (8°19'S., 111°44'E.) the E side of the N arm. Several villages stand along the shore of the latter bight.

**Anchorage.**—There is sheltered anchorage in Labuan Gangsa in a depth of 26m, mud and clay, off the village of Pager Gunung, 1 mile NE of **Pulau Ngrembeng** (8°19'S., 111°44'E.), a conical islet lying off the middle of the E side of the bay. Some above-water rocks extend 0.2 mile SW from a village close NW of Pager Gunung. Anchorage is also available in the E part of the head of Teluk Prigi in depths of 5 to 11m.

Here, vessels should berth as close inshore as possible off the pier off the village at the head of Teluk Prigi. This anchorage is sheltered from S and E winds, and landing can be easily effected. Anchorage in Labuan Damas and elsewhere off the W coast of Teluk Prigi is not safe.

**Directions.**—The recommended approach is SE, passing between Pulau Solimo and Pulau Tamengan. Soundings give no warning of the approach to the dangers.

**4.43 Teluk Popoh** (8°17'S., 111°47'E.) is entered NE of Teluk Prigi. The shores of the bay are rocky and very steep. The village of Popoh stands near the NE shore of the bay.

The entrance to Teluk Popoh is deep, and the depths decrease gradually to 37m, 3 miles NE of the W entrance point. The E entrance point is a narrow, steep-to, rocky promontory. The depths decrease to 13m near its head. The bay contains no known dangers other than a reef which extends 0.3 mile E from W entrance point.

Anchorage may be obtained by vessels with local knowledge off Popoh in a depth of 11m, the depths decreasing gradually.

For those without local knowledge, anchorage is taken in a depth of 20m. There are some shoals which have been reported to be difficult to detect because of their lack of discoloration.

The N and W sides of Teluk Popoh are unsafe during the Southeast Monsoon, and even the anchorages given above are precarious in that monsoon.

**Teluk Semrawang** (Bumbun Bay) (8°17'S., 111°51'E.), on the E side of Teluk Popoh, is only calm when there are light or

E winds. The entrance is deep and shoals gradually to 5.5m at its head.

Between the above bay and **Pulau Sempu** (8°27'S., 112°42'E.), 47 miles E, the area off the coast is unsurveyed. The coast is generally high, wooded, and for a distance W of Pulau Sempu is fringed by a coral reef. Inland of the above stretch of coast there are many villages and rubber plantations.

Pulau Sempu is a high, rocky, and desolate island. It is separated from the mainland by a narrow channel about 0.1 mile wide. There is a least depth of 10.1m in the E entrance of the channel. The S side of Pulau Sempu is inaccessible.

**Anchorage.**—Vessels with local knowledge may obtain safe anchorage on the NW side of Pulau Sempu by proceeding through the channel from E. There is a pier on the NW side of the island, with depths of 4.9 to 7m alongside. Within 12 miles E of Pulau Sempu, the coast is indented by three small open bays, but little is known of them.

Between the easternmost bay and **Tanjung Pelindu** (8°24'S., 113°24'E.), about 28 miles E, the coast forms a bight, the W part of which is rocky. Dangerous reefs are reported to extend off this part of the bight. The E part of this bight has a sandy beach, blocked by sand hills.

**Teluk Dampar** (8°17'S., 113°05'E.), at the head of the bight, has not been surveyed. Gunung Mahameru rises 15 miles NW of Teluk Dampar.

**4.44 Nusa Barung** (8°29'S., 113°20'E.), a large, rocky, wooded island, lies with its E extremity 4 miles SSE of **Tanjung Pelindu** (8°24'S., 113°24'E.). The island rises to 326m near its center. The channel between the island and the coast is deep in the fairway, but without local knowledge it is inadvisable to approach within 1 mile of Nusa Barung, as unknown dangers may exist.

**Anchorage.**—The N side of Nusa Barung is less steep than the other sides, and is indented near its center by a small bay. A vessel with local knowledge may take sheltered anchorage here in a depth of 49m.

Between Tanjung Pelindu and a steep, wooded, rocky point 5.5 miles E, there is a bay with a sandy beach in its W and N parts, backed by low marshy ground. A village stands on the NE side of the entrance to a small river, 1.75 miles ENE of Tanjung Pelindu. Anchorage may be obtained in the bay when conditions permit.

From the E entrance point of the bay described above, and a point 38 miles ESE, the coast is uninhabited except in its W part. This part is rocky, high, covered with forest, and indented with several bays which have not been surveyed.

Apart from the islets off the coast, all of which lie within 2 miles, there are no known dangers. Prominent mountains back the coast.

From position 8°37'S, 114°05'E, the coast is formed by low, wooded ground in its E part and then to **Tanjung Capil** (8°38'S., 114°13'E.), where it is high, wooded, and rocky. In the middle of the above sandy beach, the river **Kali Baru** (8°37'S., 114°07'E.) enters the sea.

**4.45 Teluk Grajagan** (8°40'S., 114°15'E.) is entered between Tanjung Capil and **Tanjung Purwo** (8°44'S., 114°20'E.), a low point 9m high, 9 miles SE. The former point rises abruptly to a mountain 384m high.

The village of Grajagan stands at the NW corner of the bay, at the mouth of the **Segara Anak** (8°36'S., 114°13'E.), but its entrance is blocked by a drying sand bank.

Anchorage may be obtained in Teluk Grajagan, during the monsoon, in depths of 15 to 26m.

Blambangan Peninsula, the broad peninsula forming the SE extremity of Jawa, extends 15 miles E from Tanjung Purwo,

and rises to 360m, 10 miles ENE of the point. The peninsula is covered with forest and has no noticeable features.

**Tanjung Bantenan** (8°47'S., 114°32'E.) is the southernmost projection of the great Blambangan Peninsula. The S and E sides of the peninsula are fringed by a drying reef up to 1 mile offshore.

The sea breaks heavily on this reef.